# THE ENTHEOGEN REVIEW

## The Journal of Unauthorized Research on Visionary Plants and Drugs

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The Journal of Unauthorized Research
on Visionary Plants and Drugs

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## STATEMENT OF PURPOSE

This journal is a clearinghouse for current data about the use of visionary plants and drugs. Think of it as a community of subscribers seeking and sharing information on the cultivation, extraction, and ritual use of entheogens. All communications are kept in strictest confidence—published material is identified by the author's initials and state of residence (pseudonym or name printed on request only). The mailing list is not for sale, rent, or loan to anyone for any reason.

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VOLUME VII, NUMBER 1 VERNAL EQUINOX 1998

WELCOME to the latest incarnation of *The Entheogen Review*. My name is DAVID AARDVARK, and I have assumed the challenging-yet-rewarding duty of editing and publishing *ER*. I've enlisted the help of technical editor K. TROUT, and together we will strive to present accurate information and do our best to answer the questions asked by *ER* subscribers. Whenever possible, to back our comments we will cite references (included in each issue's bibliography). As founding editor JIM DEKORNE stated in the first issue of *ER*, our goal is to continue to "shed a little light on [the] topic [of entheogens] and separate a few facts from what appears to be a limitless mythology."

Of course, we can't possibly have answers to all of the questions that are posed in *ER*. We heartily encourage readers to write in with their own experiences. This is your journal, and we need your input!

One subscriber, writing to "JIM, or future editors" remarked:

> Congratulations and a big thank you for being at the forefront of the fight for freedom. You are right in saying that the Internet is it [referring here to DEKORNE'S comment that "The internet is where it's at these days, and you can probably find more stuff there than here." (DEKORNE 1997)], but I believe *ER* has a very special role to fill. First, many people feel uneasy about posting things on the 'net, especially if they are incriminating. Second, it is hard to keep up-to-date with the latest developments. Popping in on 100 addresses just to see if there's something new becomes tedious and expensive. *ER* has become a little boring though, as a lot of it is mere dope tales which are repetitive and in any case subjective. Most of us psychonauts have done or heard it before (and that includes *Salvia divinorum*). Give us what the 'net doesn't and I'm sure *ER* will prosper. — DISTORTED, Australia

While there certainly *is* some very good information available via the Internet, our main complaint about this medium is the frequent lack of references. Due to this, it is sometimes hard to know what to believe and often impossible to find out for sure. Because virtually anyone with a computer can post anything they want (without the benefit of editors or peer review), information found on the Internet is suspect by nature. For this reason, we feel that there will always be a place for *The Entheogen Review*. And while we have no intention of publishing a journal which is *merely* "dope tales," we *do* appreciate the subjective nature of the entheogenic experience. These accounts—"hyperspatial maps," "trip stories," or "dope tales" (if you must)—are quite important to share, as they can provide a common framework for understanding the states of consciousness that entheogens produce, and allow us to learn through the experiences of others. Hopefully with *ER*, we can successfully balance subjective experiences and the objective botanical and chemical information; this is our goal. — DAVID AARDVARK

# HYPERSPATIAL MAPS

## MESCALYSERGIC VISIONS

Recently the great spirit has blessed me with the opportunity to begin working with what has become my most special entheogenic ally—mescaline sulfate. My first two experiences (at 400 and 500 mg respectively) with this material have easily surpassed my experiences with other "traditional" psychedelics. It is much gentler than LSD, more lucid, and euphoric, without the abrasive psychoanalytical edge that often irritates me on high dose acid trips. I find its energizing qualities preferable to the drowsy, dreamy trance I usually experience with mushrooms. I would also stress that this is far and away the most healing entheogen that I have ever encountered, both physically and psychologically. One hour into my first journey, it was inescapably clear to me why the Indians say that peyote is first and foremost a medicine. I emerged from both trips feeling as though I had productively worked through a substantial amount of psychodynamic baggage, and was physically rejuvenated to boot!

In any event, after these trips I was inspired to start learning as much as I could about my new-found ally. In the impressively thorough "SAN PEDRO FANATIC FAQ" (http://www.lycaeum.org/~iamklaus/sanpedro.htm), I read that LSD and mescaline could be combined to yield a trip that was longer-lasting and smoother than either alone. When I recently came across a hit of fresh, relatively potent (150–200 mcg) acid, I decided to test this hypothesis, hoping the LSD would function as an amplifier, allowing me to get more mileage out of the frustratingly rare, delicate, needlelike crystals of mescaline. As it turned out, I was in no way disappointed. At approximately 9:00 pm I consumed the LSD and 225 mg of mescaline simultaneously. Initial effects were felt at the forty-five minute point, building to a plateau around the fourth hour, with residual effects persisting well into the following afternoon. My theory about the LSD acting essentially as a potentiator turned out to be correct; the mescaline's warm, earthy signature was dominant throughout, while the experience felt stronger than my 500 mg mescaline-only trip.

At the peak of this journey I had a totally paradigm-shattering experience that I am at a loss to interpret. I was lying on my bed, incense and ceremonial candles alight, meditating. The air grew thick, as though pregnant with energy—like a thundercloud about to burst. My visual acuity sharpened at the same time. I looked at my hand and began to make out tiny iridescent curlicues that were superimposed as if upon a clear scrim on top of everything that I saw. Then, automatically—as if by instinct, I began to manipulate my eye muscles in a manner similar to the technique used to view those "magic eye" 3-D images (where you unfocus your eyes and attempt to look through the gibberish image to see the real picture). When I did this, the curlicues suddenly sprang into strong three-dimensional relief, and they were revealed to be translucent, iridescent tentacles or tendrils of some sort that looked like they were formed out of ectoplasm. The room was electric with a sense of presence, and I followed the line of these tendrils away from my hand to their source. I was utterly unprepared for what I saw when I did this.

Floating in the corner of my room was an enormous, shimmering, translucent, opalescent, octopod/jellyfish-like creature from which the tentacles protruded! My initial reaction was one of disbelief, mixed with a substantial degree of fear. However, the thing immediately began to caress me with its tendrils—as if to reassure me, and my apprehension completely melted away. Amazingly, I actually perceived a gentle, soothing pressure against my skin as it caressed me like a child! As it touched me I felt its consciousness partially merge with mine, and I was then flooded with a sense of love unlike I have ever experienced before, or even imagined to be possible. Comparing any experience of transcendence that I have previously had to this experience is like trying to compare a candle to the sun. I had the sense that this was a guardian angel or something similar who was always with me, watching over me, and it was absolutely overjoyed that I could finally perceive and communicate with it directly. I was so moved by this that I wept openly with joy for a large portion of the time. I lay there soaking up its affection for nearly half an hour before it eventually vanished. The trip began to gradually, gently decline shortly afterwards.

I have had plenty of entity contacts in the disembodied domain of DMT, but this thing tangibly coexisted in the same physical space/time as my body and the rest of reality, which is a new one on me! I am really baffled as to how to interpret and integrate this. Input from anyone who may have had similar experiences would be gratefully welcomed. —TREY

## *SALVIA DIVINORUM* ENTITIES

I just recently had the opportunity to try *Salvia divinorum*, and have found it to be the only entheogen that consistently propels me into entity-contact experiences after smoking.

First Attempt: Drank two quarts of kava drink (about a $^{1}/_{2}$ cup powdered *waka*-grade root). I decided that the relaxed state would be a good launchpad for the *Salvia divinorum*. I tried to smoke 1.75 grams of dried leaf in a gravity-type bong (bucket bong). The bong was too much trouble to operate smoothly enough to smoke the *S. divinorum* effectively, but I caught a glimpse of the experience.

Three entities, maybe more. One was a woman, and the others don't stand out as well. They said my name and then something like, "What are you doing here? You're not supposed to be here (now?)." Then they were like, "Oh well, let's just do it!" and they began pulling and stretching me into three sheets of color, side-by-side; red, orange, and yellow. There was a unique vibration as it came on, and during the experience.

Second Attempt: Used a water pipe, trying to consume and hold as much smoke as possible. There was no pins-and-needles feeling like the first time. I felt two helping hands, two separate human-like (African American?) entities laid me down and helped lay the pipe and lighter down. They knew me and my name. There were also these entities (not human?) made of color doing something together and pushing me away from the area—like I wasn't supposed to be there or see what I was seeing. They kept trying to convince me to not pay attention (I felt as if something important was going on and I was being made to sit back in the corner so I wouldn't see too much).

Second bowl: Immediately after coming out of the trance. I'm in a different world and body, not clear. There is a woman in the room with me who is talking, but I can't remember her words. The whole place just starts spinning (gyroscopically?); spinning and turning inside-out, always at 90 degree angles to each other.

Doors open into rooms into more doors into more rooms; insanity—pure madness!!!! Will I ever get back to where I was? The room is alive; things that are inanimate and flat take on life. Two dimensional life—Disney-like where a whole house is a living being made up of lots of separate living parts.

I came out of the trance still unsure where I was or who I was and flung my bedroom door open screaming out loud, "Is this it? Is this the real room?" I thought the whole place was going to turn inside-out again, but soon realized I was back in my usual mind-set and coming down very fast as one does from a good hit of smoked *Salvia divinorum*. — N.E.

## ABANDONING THE SHIP!

I will stop here. Entheogens have brought me too far, too fast. At these heights, it's just too incommensurably lonely for me for now. I just don't have the physical, mental, or spiritual strength to bear it, for now.

So I burned all my plants, all my books—even *Psychedelic Shamanism* (sorry, no bad thoughts in this). I will start again, from the very beginning. No more sorcerer plants until I'm myself a sorcerer. I will learn from more humble ones, learning directly from them; tomatoes, pumpkins, mint, parsley that are growing in my garden.

I'm now facing the second enemy of the man of knowledge: *clarity*. And it's even worse than *fear*. Effectively, *fear* left so immediately, I could feel it. I fought it for years and, one afternoon, I realized how I was afraid all of my life—how it has always been here. It took me then just one more fight... and she left.

But believe me, *clarity* is worse. I see everything—the meaning and the possible consequences of all words, all actions. But, as these possible consequences are infinite and—more often than not—contradictory, I just don't know what to do. Acting when I should wait, waiting when I should act. I have to be strong, that's all.

So farewell to you all, brothers and sisters. Farewell to you: Inner Frontiersman, the Gnostic, Johnny Appleseed, Toad and Hatter, Dr. Poppyseed. My path turns from here. Farewell and remember: most of us will leave the road, some of us will die on the road. I hope (I know) that a few of us will succeed. Good luck to us all. Bye. — S.H., France

P.S. Could you send me the address of Mercury Books so that I can order Volume 2 of *Pharmako/Poeia*. These are the only books about sorcerer plants that I want to keep. Poets are always right. Thank you.

## MORE *PHARMAKO/POEIA*?

I'm waiting for the second volume of *Pharmako/Poeia*—do you have any news? — M.B., Italy

Pharmako/Poeia *by Dale Pendell is published by Mercury House (785 Market Street, STE. 1500, San Francisco, CA 94103). Though this book was out-of-print for quite some time, we've heard that it was being reprinted in February, and so it should be available soon (if it isn't already). $16.95 (CA residents add 8% sales tax), plus $3.00 S/H. We asked Mr. Pendell about the status of his second volume,* Pharmako/Gnosis, *and he replied:*

> *P/Gnosis*, already longer than *P/Poeia* and with quite a few plants and substances not yet covered, may fission into two books—thus the whole work into a trilogy… The never-ending book, it seems.

*We're happy to hear that things are progressing well enough to consider* three *volumes in the* Pharmako *series, and we'll let* ER *readers know when the second volume is available.*

# NETWORK FEEDBACK

## MAO INHIBITION AND DOSING

I have two friends, "Andy" and "Bob," who used to take between three and six times as much (respectively) of any substance as me to get to the same level, and they still had a much flatter peak. We are all about the same size and weight, and lead similar life-styles. One day we were all going to partake in an ayahuasca experience. A double dose of *Peganum harmala* (just to be sure) and 30 mg DMT each. Bob got a few rushes and other physical sensations, but very little visually. Andy and I had the most amazing and scary time of our lives. (This was about a year ago.) Since then we have tried many other substances in minute quantities—like half a tablet of MDMA, LSD, mushrooms, etc.—but always with our MAO fully inhibited. For the time the MAO is inhibited, we have equal amounts of the substance to give each one of us equal effects. Even Bob is now on the same drug dosage; his problem was that even the double *P. harmala* dose was not enough. We now use Moclobemide, which is much gentler on the stomach, and easier to dose accurately. Caution: with MAO fully inhibited, one MDMA tablet equals about 8–10. It's worth mentioning that the comedown is equivalent to slightly more than the actual amount of drug taken, not equivalent to a comedown that would be expected from the experienced effects. — Distorted, Australia

*These comments regarding MAOIs and MDMA are interesting observations. One psychonaut we know of has tried the combination of moclobemide and MDMA "four to five times without any favorable results." We've also heard one report of severe adverse effects with this combination. It has been suggested that the order of consumption can dramatically effect the results experienced. However, there is evidence for a disparity of response based on many factors besides individual variation of MAO production. Frame of mind, physical condition, and environment can also play a part. K. Trout responds to this idea of combining MAOIs with MDMA:*

> It seems prudent to suggest preadministration of the MAOI and cutting the MDMA dosage to 10-20% of normal (i.e. 7–20 mg) if people are crazy enough to actually want to mix the two. The problem with making such suggestions is the automatic accusations that this potentially risky behavior is being advocated. Unfortunately some people may indeed try this after hearing about it; in one sense I really am being irresponsible to 'enable' something that **I have never and would never try nor ever recommend**. I do think it more important to help people minimize possible problems through education and awareness. I'll bet money that these two drugs have been mixed far more than has ever been reported. I certainly don't advocate the mixture, but if people are already planning on taking the mix they should know elements that might help them avoid adverse effects.

*Know your MAOIs! MAO-A is inhibited by harmaline (Ott 1994) and moclobemide (Roche). While there is evidence that MAO-B inhibitors (and mixed MAO-A & MAO-B inhibitors) may be dangerous in combination with amphetamines (and possibly phenethylamines), we know of no evidence that either amphetamines or phenethylamines are contraindicated with MAO-A inhibitors. This does not mean that this combination is safe—only that we aren't aware of it being shown unsafe. Mescaline and 2C-B have both been combined with MAO-A inhibitors by a handful of psychonauts, and we are not aware of any problems or deaths associated with this practice. Moclobemide has shown a minimal potential for interaction with tyramine, yet hypertensive persons are still advised to avoid large quantities of tyramine-rich foods in their diets while taking moclobemide. We are interested in hearing from anyone who has combined MAO-A inhibitors with phenethylamines (or amphetamines).*

*For further thoughts on individual variation of response to different drugs, we recommend the chapter "Idiosyncrasy and Pharmacophilia" in Ott's latest book* Pharmacophilia or, the Natural Paradises *(see review on page 22).*

# *SALVIA DIVINORUM:* STRUCTURES, SOLUBILITY, STORAGE & SYNTHESIS

Does anyone have documentation on the chemistry of *Salvia divinorum*? I'm looking for structures, solubility information, storage and synthesis data. — Coy Dog

*Structure: The structure of salvinorin A is* $C_{23}H_{28}O_8$ *(Ortega* et al. *1982). With regard to structure, the following comments made by Dr. Alexander Shulgin at the Mind States conference in November of 1997 should be taken into account:*

> The material in *Salvia divinorum* is not a diterpene. [This] is a misnomer. Terpenes are a very definite molecular repetitive structure; isoprene taken four times. That structure is not in [*Salvia divinorum*]. But it is 20 carbons, and diterpenes have 20 carbons, and it's often referred to as diterpenoid, which is a cop out. [...] It is [in] a family of materials that are known in several—in fact, one was mentioned, the [*Salvia*] *splendins* was mentioned a moment ago in talking to Terence—there are fully six or eight *Salvia* or sage-like materials that have these 20-carbon compounds in them... different structures, different locations of esters, different locations of hydroxy groups (Shulgin 1997).

*After hearing Dr. Shulgin's comments about "diterpene," we checked the primary literature and determined that it is possible that Ortega (who first worked out the structure of salvinorin A) is responsible for hanging the misnomer "diterpene" onto salvinorin A—actually calling it a* trans-*neoclerodane diterpene—(Ortega* et al. *1982), as a previous paper reporting the isolation of salviarin from* Salvia splendens *(Savona* et al. *1978) referred to it as "diterpenoid" (i.e. not a diterpenes but resembling a diterpene). The improper use of the term "diterpene" has now been repeated in much of the current literature on salvinorin A (Ott 1993; Siebert 1994a; Siebert 1994b; Valdés 1994; Ott 1995; Pendell 1995; Ott 1996a; Ott 1996b; Turner 1996; Beifuss 1997), including numerous earlier issues of* The Entheogen Review.

*Solubility: Salvinorin A is soluble in alcohol (methanol and ethanol have been used, as has 90% aqueous methanol), as well as being soluble in ether or chloroform. However, Ott reported that "salvinorin A is not sufficiently soluble [in ethanol, for sublingual application]," and he found that acetone and DMSO were more effective vehicles for sublingual application of salvinorin A (Ott 1995). This suggests that acetone would be a better solvent than ethanol for use in kitchen extractions of salvinorin A. A previous* ER *correspondent didn't have any luck with an extraction performed with pure ethanol (see* ER's *Summer Solstice 1997, page 2), but we have had some success using 99% isopropyl alcohol. Salvinorin A is insoluble in nonpolars like petroleum ether or hexane.*

*Synthesis: We've been unable to find a "from scratch" synthesis published for salvinorin A; Ott states that there has been "none reported" (Ott 1996). Nevertheless, the structure has been elucidated using spectroscopy and x-ray crystallography. And, there has been a published synthesis using salvinorin B as the starting material (Valdés* et al *1984).*

*Storage: Salvinorin A has been reported to be fairly stable (Siebert 1997). Still, it would seem prudent to keep it tightly closed, away from heat and moisture. We are unaware if it is light sensitive, but it can't hurt to store it in an opaque container. We called Solid Phase Science (the products division of Biosearch Technologies, Inc.), as they offer salvinorin A for research purposes. While SPS lists salvinorin A at the hefty price of $50.00 per mg (S-1000-1) or $400.00 per 10 mg (S-1000-10), they've been out-of-stock for months. When in stock, they store salvinorin A in their freezer, at* minus *5° C.*

# ENTHEOGENIC BEERS?

Now that we have beaten the absinthe issue to death, how about a dialog on the production of antique beers? As I have come to understand, beer was primarily a medicinal, and often tropane-containing plants were used in brewing. I have read something about Greek beers intentionally brewed with ergot infected rye. I gather that when the Holy Roman Catholic Church conquered Europe and helped establish the Dark Ages, one target was medicinal beer. Seems we can't have people *seeing* God when a major religion is preaching *faith*. At any rate, I gather that hops were the only acceptable substitute for power plants. I spoke with a couple of amateur brewers but they had never heard about brewing with psychoactive plants other than hops. Both of them expressed interest in trying a couple batches of these "antique brews." — Coy Dog

*Those interested in "antique brews" should check out Christian Rätsch's 1996 book* Ürbock: Bier Jenseits von Hopfen und Malz *(*Ürbock: Beer Beyond Hops and Malt*). Though in German, it is the only book we know of that deals directly with* various *beer additives "other than hops." We've heard rumors that there may be an English translation forthcoming at some point, but don't know for certain that this is the case.*

Cannabis *beer is popular among some circles of home-brewers, and is said to be tasty and effective. You might look for a book titled* Marijuana Beer: How to Make Your Own Hi-Brew *by Ed Rosenthal and The Unknown Brewer, which first appeared in the early 1980s, and was reprinted in 1996 by Quick American Archives. A southwest* Home Brewing and Microbrewery *news magazine ran a recipe for* Cannabis *beer a few months ago. They got some letters of thanks, but they also got some absolutely outraged and indignant letters, including those who claimed in their protest that they were both* *liberal and tolerant, but demanded that their subscriptions be cancelled because the use of* Cannabis *in beer associated home-brewing with criminality and also made alcohol appear to be a drug, or somehow linked it with drugs, a concept they had been valiantly battling to dispel for some time!*

## *TRICHOCEREUS PERUVIANUS*

Regarding *T. peruvianus*. The reason I believe that there are such a wide variety of reports regarding *T. peruvianus* is because many people are simply mistaking other *Trichocereus* species for *T. peruvianus* (and I bet that many different species are being sold as *T. peruvianus*, knowingly or not).

An excellent, authoritative book, *Cactus Lexicon* (I don't recollect the author's name) states:

> *Trichocereus pachanoi:* ...transverse depressions over the areoles... spines... are mostly completely absent on cultivated plants.
>
> *Trichocereus peruvianus:* Its body is erect in its early years and then becomes arching or even prostrate... frosted bluish-green color... V-shaped notch over the areoles... The spines are honey-colored below and darker above.

*T. peruvianus* is a separate species from *T. pachanoi* for two very simple and obvious reasons: 1) Its spines are much longer, and 2) As its columns age, they lean, ultimately becoming prostrate. No other "*T. pachanoi*-type" cactus does this. *T. pachanoi* spines aren't even close to the length of *T. peruvianus*. And *T. pachanoi's* branches are very strong and will not lean with age.

I've done many bioassays with the *T. peruvianus* specimens that I've sent pictures of and have no reason to present disinformation regarding bioactivity. I have many *T. pachanoi* and other species of *Trichocereus* to compare. I know *T. peruvianus* because it is my main sacrament. — D.D., CA

*While it is true that* T. peruvianus *has a much greater tendency to become prostrate, we have also seen this occur with* T. pachanoi *in cultivation. While not the norm, it certainly doesn't appear to be a truly abnormal thing for the plant. They will root where (and if) they can touch soil, often form adventurous root buds on horizontal or elevated sections, and still appear quite solid and healthy. They tend to stay thinner than other sections, send out new branches from unusual places—usually mechanical stress points—and are very potent—perhaps due to their age, perhaps due to the greater relative proportion of cortical vascular tissues.*

*In most cases* T. pachanoi *does have smaller spines than* T. peruvianus. *However, we've seen a few examples of* T. pachanoi *with spines that are quite long. This predominantly occurs on seed-grown* T. pachanoi, *which seem to show a greater variation in their morphology than most cuttings that are available (which likely arose from a single clone). Nevertheless, it is true that if one measures the longest spines on a* T. pachanoi *and compares these to the longest spines on a* T. peruvianus, *the later will always have longer spines.*

Cactus Lexicon *is by Curt Backeberg; it originally appeared in 1966, written in German and titled* Kakteenlexikon. *There is also a 1977 English version (translated by Lois Glass).*

*Ironically,* Trichocereus pachanoi *was, at one time in Ecuador, called* Cereus peruvianus *(Britton and Rose 1920)! (No relation to the cactus currently given this name.)*

*A number of photos were sent in by "D.D., CA." The cacti pictured did indeed look like* T. peruvianus, *and one picture showed an example of the "prostrate" expression of the plant that D.D. described. A photo showing a good example of a* T. peruvianus *expressing this curious characteristic can be seen in Volume II of Backeberg's* Die Cactaceae: Handbuch der Kakteenkunde *(a six volume set published 1958-62). Though in German, these books contain many more photos of entheogenic Trichocerei than* Cactus Lexicon, *and they are worth taking a look at.*

*For more on the topic of* T. peruvianus, *see* "Trichocereus peruvianus?" *by K. Trout on page 17.*

## WILD CUCUMBER?

I have heard secondhand reports that the wild cucumber or man-root (*Marah* species) is entheogenic. My informant claims to have made a tea from the root many times, and says it produces an effect very similar to psilocybian mushrooms. *Marah* species are abundant from Southern California to Washington. — B.K., CA

Marah fabaceus *is apparently also known as* Echinocystis lobata. *The only reference for "wild cucumber" as a visionary plant that we're aware of speaks of using the seeds, not the roots. This information comes from* Herbal Highs *by Mary Jane Superweed. Overall, this is an inaccurate little booklet, which discusses smoking tobacco through rotten green peppers, smoking banana peels, and smoking dill weed with monosodium glutamate. I'd take any information presented in this booklet with a big grain of… uh, monosodium glutamate. Published in 1970, it states:*

> WILD CUCUMBER (*Echinocystis lobata*). In the early 1960s several children in Ojai, California, began conversing with nonexistent persons and showing other symp-

> toms of severe hallucination. Later it was learned that they had been nibbling on the seeds of wild cucumbers. This low crawling vine of the melon family can be found growing among thickets along the coastal slopes of California, Washington and Oregon, as well as in many other places throughout the U.S. It has greenish-white flowers and a spiny, green, oblong fruit containing four large seeds. There is no information available at the present time as to the exact chemical nature of the hallucinogens in wild cucumber (possibly lysergic acid amides), but they are most effective when the seed is not quite ripe, around middle or late spring. One seed should be a good experimental starting dose. Birds eat the seed for food without any harmful results, but since its chemistry is still unknown so are its possible dangers. The trip lasts for eight to ten hours and no harmful side effects have been noted.

*From the "conversing with nonexistent persons" comment, we would suspect that belladonna-type alkaloids are present. From the time-frame of the effects reported, it would seem more like ergot-type alkaloids (though this time-frame would also apply to lower doses of belladonna-type alkaloids). Toxic and/or medicinal alkaloids are known from a variety of cucurbits, but neither belladonna- or ergot-type alkaloids have been reported as far as we know. This report of the root being used (instead of the seeds), and of it being mushroom-like, is the first that we have heard. We suggest that someone with access to this plant do an extract and send it to* DRUG DETECTION LABORATORIES *(or whoever else does qualitative analysis of street drugs).*

## MUSHROOM AYAHUASCA

Into one liter of pineapple juice (used to hasten the conversion of psilocybin to psilocin), I combined five grams (dried and powdered) *Psilocybe cubensis* and five grams (dried and powdered) *Banisteriopsis caapi* leaves. (With all of the literature that I had encountered citing the stems as the primary component containing harmala alkaloids, I felt that using the leaves would offer a mild MAOI effect; assumptions can get you nowhere and everywhere). I refrigerated this overnight. Seven travelers gathered, divided the brew equally, and cruised. The effects were rapid, beginning in about fifteen minutes, rising to a dramatic height and gradually tapering after two hours. None of us were prepared for the intensity, and our focus was not maintained as we had planned. There was a greater internal visionary display than with mushrooms alone, which was more in the green and brown range (more organic) than the blues and red that I usually experience. I also encountered some plant communion with the *B. caapi* growing in an adjacent room (vining, twining, searching, green), although this was an experience only felt by me and none of the other participants. There was some mild GI upset, and pronounced [sweating], but overall the experience was wonderful. — ORION, CO.

*Five grams of dried, powdered* B. caapi *leaves would* at most *provide 95 milligrams of total combined ß-carbolines* if *the leaves used were comparable to the strongest reported so far (*RIVIER *and* LINDGREN *1972;* MCKENNA et al. *1984). In ayahuasca, this wouldn't provide enough MAO inhibition to orally activate DMT for* one *person (*OTT *1994). It is certainly possible that a greater quantity of* B. caapi *leaves could be used (rather than stem) as the MAOI in ayahuasca, and—while liana production is outside the reach of all but a few individuals with greenhouses, who might produce enough material for themselves and a couple of friends—growing ayahuasca for leaf and new growth production is well within the capabilities of most people. Nevertheless, we vaguely recall hearing that the natives don't use the leaves as they cause much more nausea than the stem bark (perhaps the leaves contain flavonoids, tannins, or other toxic materials). Regardless, it seems unlikely that the small amount of* B. caapi *leaves added to this brew had much to do with the apparently increased potency, though we are at a loss to explain why less than* $^3/_4$ *of a gram of mushrooms per person would have such pronounced effects.*

*Not familiar with the idea that adding pineapple juice to ground psilocybian mushrooms will "hasten the conversion of psilocybin to psilocin," we asked Dr.* ALEXANDER SHULGIN *if he thought that this would occur. He responded:*

> Lordy, I have no idea. I kinda doubt it. Fresh pineapple (especially unripe pineapple) contains a rather potent protein hydrolysis enzyme called [bromelain] which is pretty effective at tenderizing raw meat (and is why there is no such thing as fresh pineapple Jell-O, since gelatin is also a protein). But there is no protein-like bond in psilocybin. And why would one want to do such a conversion anyway? Recent Swiss trials have demonstrated that psilocybin metabolizes to psilocin (and to 4-hydroxyindoleacetic acid) in the human body. And for storage purposes psilocybin is the more stable compound.

*Indeed, it* may *be that the antioxidant quality of any vitamin C contained in pineapple juice actually reduces the conversion of psilocybin to psilocin. See "Internet Mushroom Info" on page 8 for more on this idea. On the unrelated topic of possible mechanisms for "potentiation," we've seen speculation on the Internet that the use of white grapefruit juice may "potentiate" specific visionary drugs (DXM was mentioned as one possibility), due to this juice containing "naringenin, which inhibits the P450-1A2 and 3A4 liver enzymes." As well, we've heard Internet rumblings that 5-hydroxytryptophan has been used successfully with MDMA "100 mg just before the peak, or on the way down, seems to greatly enhance the entactogenic/empathogenic qualities without causing an in-*

*crease in muscle tension, gitters, etc." Finally, one last Internet-reported experiment: "Mildly positive" results have been touted from taking three grams of Ca/Mg supplement over one hour prior to ingesting MDMA. (This practice is based on the idea that amphetamines are more easily absorbed in an alkaline gut.) Apparently the Ca/Mg reduces "jaw clench."*

## INTERNET MUSHROOM INFO

I know how some readers feel about the validity of Internet information on entheogens, but sometimes I find something that seems legitimate. THE LYCAEUM has certainly helped to pool some creative, knowledgeable thinkers. Anyway, I offer the attached web page. *[As the link for this page is no longer active, we've summarized the information from this page below.]*

> The "blueing" reaction of mushrooms is a result of psilocin being converted into diquinone. Hence, the bluer the mushroom is, the less psychoactive it will be. Eating fresh mushrooms is said to be bad, as some of the psilocin is said to convert to diquinone. Effects of diquinone are said to be anticoagulant (at high doses leading to internal bleeding), and can cause tinnitus, dizziness, nervousness, and nausea. Two processes are related to "get rid of" diquinone: "steam" and "vitamin C" treatments.
>
> Steam-treating is only to be done on previously dried mushrooms. They are supposed to be placed in a vegetable steamer for five minutes or longer, until all of the bluish color is gone, and then the mushrooms should be immediately eaten or redried. The claim made is that steam-treatment causes the diquinone to be converted (hydrolyzed) back into psilocin. This is said to also improve the taste, as diquinone is said to taste horrible. The steam treatment is said to destroy the enzyme that converts the psilocin into diquinone, so after this process is done—if the mushrooms aren't eaten immediately—they can be redried without worry of future reconversion of psilocin into diquinone. Psilocin is said to still degrade over time through oxidation, but not through the enzymatic conversion into diquinone.
>
> The claim is made that vitamin C, acting as an antioxidant, can "deoxidize old weak psilocin back into its original form." An experiment is presented wherein one puts a small amount of dried mushrooms in a glass of water, and allows it to oxidize for 30 minutes (or until the mushroom turns really bluish), and then adds 100 mg of powdered vitamin C to the water, mixing it in and allowing it to sit for 30 minutes. The blue-staining diquinone is said to be deoxidized back into psilocin.

I have tried the experiment and sure enough, psilocin-containing mushrooms turn white. I also tried the steam treatment, *and* dissolved a vitamin C tablet in the water. After a second drying, which required only a few hours on desiccant, the mushrooms returned to their natural white color, with a wood-colored cap. A bioassay produced a much cleaner, clearer feeling, with a substantially accelerated onset. This has become my preferred method of preparation, and I encourage others to try this method for themselves and contribute their results. I would also like to know if anyone can substantiate the claims made on this web page. Are the chemical reactions occurring as the [web page] author contents? — RHOMPUS (formerly HERSHEY), NM

*As is typical with the Internet, information is posted without any references given. What is true? What isn't? How do you know? We checked on some of the above information in a series of articles titled "THE MUSHROOM ENTHEOGEN" by C. B. GOLD, which appeared serialized in* Psychedelic Monographs and Essays, *Volumes 1, 2, 4, 5, and 6. According to GOLD:*

> [The bluing of psilocybian mushrooms] is an enzymatic oxidation of the various indole-containing molecules in the mushroom tissue, such as tryptophane [*sic*] or psilocin. This bluing reaction breaks down psilocin and psilocybin to inactive compounds. It is also possible that these breakdown products may be toxic.
>
> Psilocybin is the first naturally occurring indole which has a phosphate ($PO_4$) group. The phosphate group acts to protect the psilocybin molecule from degradation by potential chemical reactants. In the bluing reaction the psilocybin in the mushroom is first stripped of its phosphate radical to psilocin by a phosphatase enzyme. Then it too is oxidized. The psilocin is then quickly oxidized by metalloprotiens, like cytochrome, to a blue product. There is evidence to support that the blue product is a quinone. [...]
>
> Vitamin C apparently inhibits the bluing reaction and the degradation of tryptamines. [...] Vitamin C reduces the bluing color, but *does not reverse the colored product back to an active tryptamine* (GOLD 1985). [Emphasis added.]

*GOLD came to these conclusions through reading the literature, as well as through running his own colorimetric (light absorption) and bioassay tests. GOLD further commented:*

> I have indirect evidence that the bluing reaction may in fact be an important step to one who wishes to reduce potential side effects in the mushroom experience. Bluing may oxidize some tryptamine analogs of psilocin to

> easily excreted metabolites. This could account for some reduced side effects for those who have a toxic reaction to those tryptamine analogs.
>
> When I have reduced the bluing effects by denaturing the enzymes involved or by chemical means, the subjective experience has always included an increase of restlessness and sometimes even worse side effects, such as headaches or long-term headaches or fogginess of the experience (GOLD 1985).

*GOLD contradicts the above comment a bit, in a later installment:*

> The subjective results of using vitamin C as a pretreatment included a more mentally clear trip when compared with air dried mushroom, especially when coming down. Also, vitamin C reduced the headaches somewhat. But it increased the gas, cramps and nausea (GOLD 1987).

*Through numerous experiments, GOLD determined that the most potent mushrooms with the least amount of side-effects are created by vacuum drying them (without a vitamin C additive). Anyone seriously interested in the topics of drying, storing, and maximizing potency of mushrooms should read this series of articles.* PM&E *is available through ROSETTA.*

*We e-mailed DR. ALEXANDER SHULGIN for his thoughts regarding the idea presented on the Internet that steam treatment or vitamin C treatment could cause "the diquinone to be converted (hydrolyzed) back into psilocin," or "deoxidize old weak oxidized psilocin back into its original form." He commented:*

> I have received your mailings regarding psilocybin and psilocin, and I am afraid that they raise more questions in me, than answers.
>
> Does steam treatment or vitamin C treatment of dried psilocybian mushrooms convert the diquinone back into psilocin?
>
> Here again I plead ignorance. I had not heard of any enzymatic process that converts psilocin into a diquinone, and in fact I have not heard of a diquinone. I would love to get reprints of any related publications and, with them in hand, I might be able to make an educated guess. I just now completed a keyword search for both psilocin and psilocybin in both CURRENT CONTENTS and MEDLINE, and scanned the downloaded mass for the word quinon# and there were no hits. This should have picked up quinone, diquinone, quinonic, etc. The chemistry as to why some of these mushrooms turn blue upon bruising may well be worked out, but I do not have any references to them.
>
> I am afraid I haven't been much help. Good luck to you on *The Entheogen Review* adventure. — SASHA

**ER:** *Hi Sasha, thanks for your thoughts. In checking around on this, I did find one reference on this in an article titled "The Mushroom Entheogen:"*

> In the bluing reaction the psilocybin in the mushroom is first stripped of its phosphate radical to psilocin by a phosphatase enzyme. Then it too is oxidized. The psilocin is quickly oxidized by metalloprotiens, like cytochrome, to a blue product. (9) (14) There is evidence to support that the blue product is a quinone. (3) (16)

*The references given in parenthesis above are:*

*(9) DUFFY, THOMAS J., M.D. and VERGEER, PAUL P.* California Toxic Fungi. *Mycological Society of San Francisco, 1977.*

*(14) OSS, O.T. and OERIC, O.N.* Psilocybin: Magic Mushroom Grower's Guide. *Berkeley, California: And/Or Press, 1976.*

*(3) BOCKS, SHEILA M. "Fungal Metabolism IV: The Oxidation of Psilocin by* p*-Diphenol Oxidase (Laccase),"* Phytochemistry, *VOL. 6 (1967), 1629- 1631.*

*(16) POLLOCK, STEVEN H.* Magic Mushroom Cultivation. *San Antonio, TX: Herbal Medicine Research Foundation, 1977.*

*Reference #3 looks the most promising for an answer, and we're gonna try to track it down.*

*Does it strike you that—if what is being claimed is true (that is, if psilocin is converted to diquinone), that it is feasible that either a simple steam treatment or a reaction to vitamin C might reverse this conversion changing the diquinone back into psilocin; or does this strike you as being an unlikely statement within the realm of chemical reactions? Christ, if all it took was adding a little vitamin C or steam to diquinone to create psilocin, this might be the easiest way in the world to create this entheogen. It couldn't be true, could it?* — ER

> **DR. SHULGIN:** That reference #3 sounds like the winner. It has the earliest date of the four of them, and just might be the source for the others. I was totally unaware of it, and the next time I am at the MED SCHOOL library over in San Francisco, I will get it.
>
> The term that I got hung up on, was diquinone. If there is really a quinone involved, there must require the introduction of a second oxygen atom. If that indeed occurs, then no simple reduction will remove it, thus making a return to psilocin most unlikely. However if the "diquinone" term is being used in a loose sense, it might be that the oxidation removes the two easily available hydrogen atoms, one from the 4-hydroxy group and the other from the indolic 1-position nitrogen. The result of

that action would be to produce a double bond extended conjugation system of five double bonds across the two rings with the loss of aromaticity of the benzene ring. This product would certainly be highly colored but, as no C-C or C-O bonds have been formed, its reduction back to psilocin would be quite easy. Steam may not have the capability, but there would be any number of gentle reducing agents that could do the job. Is vitamin C an actual reducing agent, or is it just an antioxidant?

Fascinating concept. That *Phytochemistry* paper is essential, and just might be a treasure. — SASHA

*We also asked K. TROUT for his thoughts on the above. He responded:*

About the claim that adding vitamin C to a blue solution of mushrooms and seeing the blue disappear means that the psilocin reforms. This reaction represents no proof that psilocin reforms. One would have to prepare two identical glasses and decolorize only one and assay both of them. While it would be easy to tell if the decolorized solution is active, I know that "blue" solutions of mushrooms are potent as well. The bioassay result is intriguing; this should certainly be looked at further. If the presence of the blue color adds to discomfort, this may be a good thing to pursue. Off the top of my head I suspect that, if the first reaction actually occurred as described, the reaction would go one way only, and psilocin would be an extremely unlikely product if said mysterious *diquinone* was subsequently broken apart.

I would also like to know where and how it was finally determined that bluing was directly related to psilocin converting to "diquinone." Or even that bluing was *proven* to be directly related to psilocin? Reported studies by BIGWOOD (mentioned by OTT) suggested that bluing may not be dependent on the presence of psilocybin or psilocin—so more work is clearly needed.

For example, it is a known fact that a few very effective mushrooms (like some *Panaeolus*) *do not* always turn blue, yet apparently contain psilocybin and/or psilocin. There are also mushrooms that blue which contain *no* psilocybin or psilocin.

GOLD'S comment that there is evidence (???) to suggest the blue product is a quinone does not suggest the product of the breakdown of psilocin was determined to be diquinone. (It *would* be good to eliminate quinones *if* they were present.) To be a quinone (and, by extrapolation, whatever the fuck a diquinone is), there would have to be serious modification of the molecule. This is unlikely to be reversed by heating, vitamin C, or use of an acid (or any simple procedure for that matter). It is also unlikely that psilocin could be converted to a quinone by any single enzyme, or that natural psilocybian enzymatic pathways even exist that would go that route. SASHA'S comment on the word diquinone is a good one; I cannot locate this word either so far, and I find it highly suspect.

One question I do have about all of this: When cooking mushrooms out with lime juice and water (fast: two low-volume extractions heated in a small pan with the juice of half a lime each and a maximum of $^1/_4$ cup of water each, for 12–15 minutes) the difference in effects between the resulting mushroom/lime-tea and eating dried mushrooms is quite similar to what is described in the Internet information, as is the reduction of coloration (to a very pale greyish tawny cast). I don't experience this same difference when I drink non-acidified tea that has been simmered for prolonged periods. I've always assumed the difference was simply due to inactivation (via acid hydrolysis) of a bacteria that caused intestinal distress. I need to re-examine this belief in light of the current discussion.

If simple enzymatic inactivation is all that is being accomplished, this is also performed effectively on most enzymes by heating them to a high enough temperature to denature the protein (this is what would occur with steaming, if inactivation of an enzyme is all that is happening; most enzymes are denatured below 200° F), or by exposing it to a concentrated form of alcohol like vodka or Everclear (i.e. 50–95% ethanol), or by exposing it to an acidic solution (unless said enzyme is designed to handle acids). I have heard that sprinkling vitamin C powder on mushrooms prior to storage will help them keep for long periods of time, but I have not tried it.

After reading a copy of the BOCKS' *Phytochemistry* paper, a few points immediately jumped out:

1) The enzyme they used was extracted from *Polyporus versicolor*, which doesn't produce psilocybin or psilocin. That the *p*-diphenol oxidase even occurs in *Psilocybe* species, was apparently never determined or even attempted to be determined (if so, it was not mentioned); only that another enzyme (ceruloplasmin) had shown a similar substrate specificity to *p*-diphenol oxidase from other sources, and was shown (elsewhere) to be able to catalyze "the oxidation of hydroxyindoles such as psilocin."

2) The blue product formed when they exposed psilocin to their enzyme was found to be similar in color and UV spectrum to the blue product obtained by reacting psilo-

cin with the oxidizing agent ferric chloride. At no point did they isolate it, much less attempt to determine its structure. They did not even directly compare it to the blue color observed in mushrooms or attempt to determine what is actually blue in psilocybian mushrooms.

3) Psilocybin was found to be entirely unaffected by their enzyme. As psilocybin is often more abundant than psilocin, and at least some commonly used psilocybian mushrooms apparently lack psilocin altogether (yet still "blue"), the assertion of decreased potency cannot be considered a blanket statement—only one that might relate to psilocin-containing mushrooms.

That a phosphatase might readily convert psilocybin to psilocin and enhance this deterioration may well be true, and I suspect this factors into the disparity OTT discussed when mentioning that psilocybin/psilocin mushrooms must be kept frozen and do not keep for long, while psilocybin-containing mushrooms with *no* psilocin will keep well at room temperature for fairly long periods of time. Perhaps lack of said phosphatase is involved?

4) The only conjecture that was made about the structure of the blue product was that it was "probably quinonoid in nature." At no point did they state it was a quinone.

5) The article mentions dimeric quinones (*not* diquinones, but perhaps this is where the author of the web page derived that word) being formed by the experimental oxidation of two different phenols. While psilocin is also a phenol, it contains an additional indole ring and a side chain lacking in both other far simpler phenolic compounds. To get a quinone, serious modification of the structure would have to occur and, as SASHA pointed out, a second oxygen would have to be introduced from somewhere. Obviously the starting compound is not going to be regenerated by any type of simple reduction.

6) While the reduction with ascorbic acid or sodium dithionate eliminated the blue color, there was never any suggestion that psilocin was reformed or generated.

While this may not answer the question of what the blue color is, or how (and if) it actually relates to psilocybin/psilocin, one point is very clear: the referenceless web page author drew some unlikely conclusions that are not supported at all by what we can find so far. It is amazing that people can present such statements, and not be bothered to include supportive references! Additionally, I am puzzled as to how GOLD reached the conclusion that "There is evidence to support that the blue product is a quinone," as it is not supported by the primary research paper that *he* cited.

*We are once again left feeling as though, in some cases, the Internet* is not *"where it's at" with regard to information on entheogens.*

## BORAMETZ BULLSHIT

On page 14 of the 1997 AUTUMNAL EQUINOX issue of *ER*, "G.A., KY" describes an interesting "Borametz Meditation." Editor JIM DEKORNE follows this with the comment that, "Borametz extract, in the form of an oil available from herbalists, comes from the leaf of the Borametz tree, an evergreen native to Russia." This information is incorrect. What's being sold as "Borametz" has not been extracted from plants. These "plant extract" claims were first presented to me from the person/company that I purchased a bottle from—GEORGE ANGELIDIS in Kentucky. Similar claims have been presented by other companies selling this product. I've had two samples of "Borametz" tested by GC/MS (thanks go out to chemist '5-HT' for these analyses). Both samples had the "ANGELIDIS" product label on them, but one came from ANGELIDIS and one came from another company, SHAMANIC TONICS. Chemist '5-HT' comments on the results of the first GC/MS test:

> There was one major peak representing 93.67% of the total material and having a retention time of 4.85 minutes. MS showed it to be consistent with 1,4-butanediol. There was a second minor peak being 6.33% and having a retention time of 5.50 minutes. The library suggests this is 1,2,3,4-butanetetrol (maybe a starting material or breakdown product?). And that's it. No more peaks. The claim that the product contained natural extracts is almost certainly false as one would expect a forest of peaks. This is tech-grade chemical, in my opinion.

The second GC/MS test (from a different bottle of "Borametz") showed "a mixture of 1,4-butanediol and glycerin (w/ 1,4-butanediol as the main ingredient). NMR confirms alkyl peaks of 1,4-butanediol as well as others that *may* be glycerin."

ANGELIDIS no longer sells "Borametz," as he says that his supplier went out-of-business. However, he apparently now sells a similar, *admittedly* synthetic product, labeled as a "Leather Nourisher," and sold "not for human consumption." I had this product tested by GC/MS, and it appears to contain 1,3-butanediol and 1,4-butanediol.

I also had a sample of 99% 1,4-butanediol tested by GC/MS, as a comparison. For this test, a kilogram of 1,4-butanediol was obtained from Aldrich for about $20.00. I mention the price from Aldrich, as Angelidis was selling "Borametz" for $30.00 per ounce. With about 35 ounces in a kilogram, this represents an *obscene* $1030.00 net profit from a $20.00 investment! I have no idea where Angelidis obtained his "Borametz," or for what price, but it is quite obvious that somebody somewhere was/is getting rich from this deception. I don't know what Angelidis is charging for his "Leather Nourisher," but I would *hope* that it is substantially less.

Again, "Borametz" doesn't come from plants. The main active ingredient, 1,4-butanediol, is converted by the human body into GHB. For more information on effects from consumption, toxicity information, and sources for 1,4-butanediol, see "The Borametz Scam" in issue No. 2 of *The Resonance Project*. Or, for an unedited and updated version of this article (including GC/MS printouts for "Borametz," "Leather Nourisher," and 99% 1,4-butanediol), send $5.00 to: Soma Graphics, POB 19820, (Dept. ER), Sacramento, CA 95819. —Jon Hanna, CA

## CORRECTION:

*On page 9 of the 1997 Winter Solstice* ER*, the "Easy Vaporizer Pipe From Old Light-Bulb" plans were attributed to Inner Frontiersman. This was incorrect; the plans actually came from Prairie Dragon. We apologize for the confusion. — Ed.*

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# TERENCE McKENNA SPEAKS...

Transcribed from a video broadcast at the MIND STATES conference, November 23, 1997.

I know that whenever the tribe gathers, whenever the psychedelic community comes together in one place, the issue of our status with regard to the rest of society, and the issue of the status of these substances about which we care so much is discussed. Should we expend political, capital, and social energy to make these things legal? If we did, would many more people who don't today take these things feel free to explore them? Or, in a way, is this wish to legitimize our activities by having them brought in under the umbrella of legality... in a sense, it's a very unpsychedelic impulse. It is an effort to somehow make peace between cultural values; constipated Christianity-driven Calvinistic and the untrammeled wild wilderness of the psychedelic experience. I admire the people who have worked for medical marijuana, the chemists who have given expert testimony in an attempt to help out members of the community who have run afoul of the law, as they say. But I wonder, really, if the psychedelic agenda is to be satisfied by simply gaining legal legitimacy?

We have a very interesting plant now working its way into our midst—*Salvia divinorum*. *Salvia divinorum* is not illegal, it's easily grown throughout the civilized world, it does not have to be administered in some potentially damaging way—in other words, it doesn't have to be shot; it can be smoked, it can be chewed. And it is without question, extremely powerful and effective. It's amazing to me that this plant could appear in our midst, with these qualities, and be accepted with such lack of fanfare. In other words, this is truly big news. In a sense, Nature has stepped into the drug legalization issue—the psychedelic legalization issue—with a *deus ex machina*. I don't believe the establishment is interested in demonizing and criminalizing a new easily grown, widely available psychoactive plant. I don't think the establishment needs a new *Cannabis*. [...] Late in the dialogue about psychedelics, who would have thought that [nearly sixty] years after the invention of LSD and the flurry of psychedelic excitement among the botanists of the '60s and the '70s, that not only an entirely new substance would be discovered, but a substance in a chemical category previously unsuspected of psychoactivity. So in a sense, this is a wild card in the deck, and if we—the psychedelic community—play it to our advantage, we can perhaps transcend the them/us dualism of [drug repression/drug advocacy]. Well, how is that to be done? The answer I think, is *responsibly*, with attention. Let us not generate emergency room entries and drug casualties based around *Salvia divinorum*—this is the raw material out of which our enemies will fashion our nemesis.

In the past, the psychedelic community has too often been influenced by those who, I think, didn't have its best interests in mind. And by that I mean people who saw psychedelics as somehow a fuel for the popularization of a certain musical agenda, or a certain political agenda, or a certain commercial agenda. I think that if we insist that these things are to be taken—and taken seriously, and taken in shamanic settings—that at this point in the struggle over psychedelics, the establishment is so demoralized, spread so thin, so exhausted, that they will simply decide to leave this particular compound alone. And that will indicate, to me at least, the turning of the tide.

You know, with these new techniques of liquid $CO_2$ distillation of plant materials, *nanogram* quantities of material that was previously destroyed by high temperature extraction is being gotten out and characterized. And, as you might have predicted, the revelation is that *alpha*-salvinorin, the active ingredient in *Salvia* [*divinorum*] is very probably only one of an entirely new family of psychoactive drugs. What these drugs eventually will do in terms of the experience they elicit, we don't know. We may be looking at new tranquilizers, new stimulants, new psychedelics, potential memory enhancing drugs, potential learning enhancing drugs, we don't know. This is a cornucopia of new psychedelic possibilities.

At this point, the average man and woman on the street has never heard of *Salvia divinorum*. If the community acts responsibly, they *will not* hear about it for some time. This is an opportunity for us, for the first time in our lives to take, advocate, synthesize, extract, explore [and] do therapy with a psychoactive compound that is *not* illegal. We have not been in this position since 1967, that's more than the lifetime of many of you. So lets take this opportunity, and this plant, and attempt to use it as a model for bringing it and other potential psychedelics into ordinary human usage and put them to the purpose of reconnecting ourselves to the values of the earth, and reconnecting ourselves to each other. ✶

# PHARMACO PROHIBITA

### BY RICHARD GLEN BOIRE

**Q:** Is Chemical Resale of Santa Barbara (CRSB) a DEA cover?

**A:** The DEA has been known to set up fake chemical supply companies aimed at attracting and then busting manufacturers of controlled substances. For example, in 1982 the DEA operated a company called Universal Solvents of America, and advertised the company in "drug oriented" magazines. Similarly, the DEA ran a bogus laboratory equipment and chemical company called Geo-Data Chemicals in Boise, Idaho. Both fronts led to arrests and convictions.
h
By all indications (including reports from people who received orders), CRSB sold chemicals and glassware to the general public. The company's "we deal with anyone" manner, combined with their product line, and odd payment policy (some transactions had to be paid with a personal check), has led to speculation that they might be a DEA front. Orders could be placed via CRSB's web site, which was well-indexed on all the major search engines. I have only seen a partial list of the chemicals sold by CRSB. While all appeared legal themselves, some could be used in the manufacture of controlled substances.
h
While I doubt that CRSB was a DEA front organization, it is possible that the DEA now has the names and addresses of anyone who ordered from CRSB. In July of 1997, Tom Kasper, CRSB's owner (known as "wirehead" on the CRSB web site), assaulted a flight attendant while on a Continental Airlines flight from Houston to Los Angeles. Evidently, he blew his top when the airline refused to upgrade him to first class. Enraged, he grabbed a scalding pot of coffee and poured it on one of the stewardesses, causing severe burns on her hand. He then tried to open one of the airplane doors as it was landing. Kasper was arrested for interfering with a flight crew during flight (Reuters 1998).

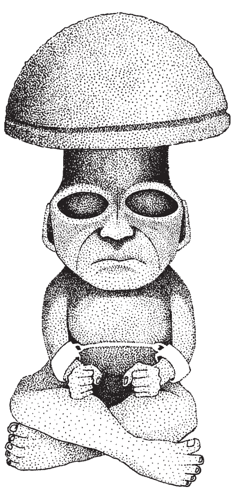
No doubt, from the time of his arrest, Kasper was the target of intense federal investigation and certainly the investigators must have learned of his chemical resale business. In late 1997 and early 1998 there were rumors on an online discussion forum that the DEA *did* shut down CRSB for selling GHB precursor chemicals; I was unable to confirm these rumors. On January 12, 1998, Kasper pled guilty to the federal charge of disrupting the flight and currently faces a maximum sentence of life in prison. Sentencing is set for April 27, 1998.

CRSB's web site is no longer accessible; I suspect that the company is defunct. Of course, a man who faces life in prison has a great incentive to cooperate with the authorities. I wouldn't be surprised if the feds take an interest in CRSB and, one way or another, obtain information about CRSB's former customers, or those people who now contact the company via mail. On the other hand, the government has evidently chosen not to maintain the CRSB web site or transform it into an information-gathering front; a move they would logically have taken if they believed it would lead them to underground chemists.

Richard Glen Boire is an attorney who specializes in divining the law constellated around ancient and modern shamanic inebriants. He is editor of *The Entheogen Law Reporter* (*TELR*), and author of *Marijuana Law* and *Sacred Mushrooms and the Law*. For more information on these publications send a long SASE to: spectral mindustries, POB 73401 (Dept. ER), Davis, CA 95617-3401.

Questions for possible inclusion in this column can be sent to Mr. Boire in care of *ER* at: Pharmaco Prohibita, c/o *The Entheogen Review*, 564 Mission Street, Box 808, San Francisco, CA 94105-2918.

**SACRED MUSHROOMS AND THE LAW**
by Richard Glen Boire
Foreword by Terence McKenna



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# SOURCES

### BY WILL BEIFUSS AND JON HANNA

**AMAZON JAUNT**
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**Makawao, HI 96768**
**(888) 777-5981**
**axiom@aloha.net**
**http://www.aloha.net/~axiom/amazonreg.html**

PETER GORMAN, executive editor of *High Times* magazine, will lead three two-week expeditions to the upper Amazon in and around Iquitos, Peru. The trips focus on ayahuasca shamanism and include lessons in plant collecting and jungle survival. The first trip was March 7–20. Additional trips are April 4–17 and August 15–28 and cost $2,200.00 each. GORMAN has made almost two dozen trips to the Amazon to study indigenous cultures, shamanism, ethnopharmacology, and rain forest destruction.

These expeditions are expensive, and we're not big fans of ayahuasca tourism. However, GORMAN would be a good guide and a lot could be learned. The trips include four evening ayahuasca ceremonies. Remember, all ayahuasca is not created equal; we suspect that it may be common on these types of trips to serve ayahuasca that is quite mild to avoid potential problems that might arise from people who have little experience with entheogens getting in over their head.

A one week trip is offered to Machu Picchu, which includes a San Pedro ritual and a mushroom ritual ($1,300.00). There's also a one week trip offered to several villages located along the Ampayacho river, which does not offer any ayahuasca or other entheogenic rituals ($950.00).

**THE BASEMENT SHAMAN**
**POB 1255 (Dept. ER)**
**Elgin, IL 60121**
**(847) 695-2447**
**bshaman@interaccess.com**
**http://www.entheogen.com/shaman/#table**

THE BASEMENT SHAMAN now has a web site and several new products, including:

ABSINTHE MAKING KIT: "We've researched many sources to find one of the finest authentic absinthe recipes. We've assembled all the necessary herb and spice ingredients (you'll provide your own spirit of choice) along with a detailed and illustrated instruction guide. You'll learn how simple it is to master the fine art of distillation using a few kitchen gadgets and some common items obtained from the local hardware store. This kit contains enough botanical ingredients to produce four liters of premium absinthe." Kit is $28.00.

CALEA DREAMS: "The obscure dream herb, *Calea zacatechichi*, is married with over a dozen herbs, pure flower and plant essences chosen for their ability to promote vivid and lucid dreaming. Contains *Calea zacatechichi*, *Mimosa pudica*, poppy flowers & over twelve other rare plants and botanical essences." One ounce is $15.00.

**DAN AFRICAN ETHNOBOTANICALS**
**POB 55033 (Dept. ER)**
**Northlands 2116**
**South Africa**
**+2788 125 2095 2788 (voice mail)**
**ethnobotany@iafrica.com**

A supplier of *Tabernanthe iboga* seeds and root-bark. Other African entheogens on request, when available. To place an order, inquire by e-mail (preferred), post or voice mail. Prices vary—you will receive a reply detailing current costs and payment procedures. We only know of one person who has placed an order, but he received it with no problem.

We've recently heard the claim that ten grams of *T. iboga* root-bark is an adequate dose. However, OTT lists the threshold dose of twenty grams as being "thought to contain about 75–125 mg of ibogaine" (OTT 1996). In *The Secret Chief*, the dose for ibogaine is given as 225–300 mg (STOLAROFF 1997). This puts a dose of root-bark at about 36–80 grams, depending on actual alkaloid content. Anyway you slice it, *T. iboga* is going to be an expensive trip.

**D.M. TURNER'S BOOKS ON-LINE**

*The Essential Psychedelic Guide*
http://www.geocities.com/HotSprings/Spa/4558/

*Salvinorin: The Psychedelic Essence of Salvia Divinorum*
http://squeaker.cat.net/~donut/scov.html

**HANS-JOACHIM SCHULTZ**
**Theodorstr. 362 (Dept. ER)**
**40472 Düsseldorf**
**Germany**
**0211-652663 PHONE & FAX**

A small-but-good selection of plants, seeds, and herbs: *Acorus calamus*, *Anadenanthera colubrina*, *Argyreia nervosa*, *Corynanthe yohimbe*, *Ephedra* species, *Ipomoea tricolor*, *Mimosa hostilis*, *Mucuna pruriens*, *Peganum harmala*, *Phalaris arundinacea*, *P. aquatica*, *Piper methysticum*, *Psychotria viridis*, *Salvia divinorum*, *Stipa robusta*, *Tabernanthe iboga*, *Trichocereus peruvianus*, and *Voacanga africana*. Most interesting to us is the *T. iboga*, which is generally hard-to-find. All prices are in deustch marks; send for a current price list.

**HERBAL-SHAMAN**
**POB 8892 (Dept. ER)**
**Wichita, KS 67208**
**(316) 685-9199 (voice mail)**
**shaman@herbal-shaman.com**
**http://www.herbal-shaman.com/hshome.htm**

This company offers eleven different live *Trichocereus* species! These are small plants, offered in 4" clay pots, ranging in price from $7.50 to $9.00 each. Other plants and seeds include: *Acorus calamus*, *A. gramineus*, *Anadenanthera colubrina*, *Argyreia nervosa*, *Atropa belladonna*, *Catha edulis*, *Datura stramonium*, *Desmanthus illinoensis*, *Papaver somniferum*, *Peganum harmala*, *Rivea corymbosa*, *Salvia divinorum* (two plant clones, dried leaves, and leaf extract), *Turnera diffusa*, and *Voacanga africana*. Their prices are very reasonable.

Their web site has an archive of extensive information on cactus cultivation and grafting. The archive will eventually have cultivation info. on all the plants offered, but right now it is largely under construction. Their print catalog is free.

**THE HERBEN SHAMAN**
**(920) 699-5650**
**herben_shaman@usa.net**
**http://ayahuasca.lycaeum.org/Herben-Shaman.htm**

Very inexpensive *Peganum harmala* seeds: $3.00/oz, $5.00/3 oz, $20.00/lb, $35.00/kg. Other companies charge between $8.00 and $20.00 per ounce! They also have *P. harmala* extract resin: $1.00/gm, $20.00/oz; and dried *Salvia divinorum* leaves: $2.50/gm. Call or e-mail to place an order.

**JODY HORD**
**1430 Willamette Street, #4 (Dept. ER)**
**Eugene, OR 97401**

JODY HORD's main product is a "5x" extraction of *Salvia divinorum* leaves. HORD makes the following claim: "The active principle from five grams of dried *S. divinorum* leaves is extracted and applied to one gram of dried leaf." Both WILL and I have tried this extract, and found it to be quite effective. I've had a hard time feeling any effects from numerous preparations of *S. divinorum*. My most intense effects to date have been from using this extract. $18.00 per gram plus $2.00 S/H (orders for three or more grams are shipped free). HORD also sells dried *S. divinorum* leaves, organically grown in Hawaii; $20.00/7 gm, $30.00/14 gm, $55.00/oz—postpaid. Payment must be made with cash or a money order with the "pay to" space left blank (no checks are accepted).

**NEW MILLENNIUM INSTITUTE**
**POB 958, (Dept. ER)**
**Kamuela, HI 96743**
**(808) 885-2181**
**(808) 885-5570 FAX**
**nmi@aloha.net**
**http://www.planet-hawaii.com/nmi**

The NMI is again offering one of their seminars with TERENCE MCKENNA, from May 24–30, 1998. This educational retreat will be held in the comfort and privacy of a magnificent home designed by FRANK LLOYD WRIGHT on the Big Island of Hawaii. Enrollment is limited to 20 participants. Tuition ($1,575.00) includes airport transfers, ground transportation, six nights shared accommodations, breakfast and lunch daily, three evening meals, cultural tours, rain forest hikes, yoga classes, and a daily lecture and discussion. Payment is due in full by April 10, 1998. Call or e-mail for a brochure.

WILL BEIFUSS is the author of the *Psychedelic Sourcebook*. He is the founder of the *TRANS*-NEOCLERODANE CHURCH and lives along a remote section of the Deschutes River in Oregon.

JON HANNA is the author of the *Psychedelic Resource List*. He is a free-lance editor, writer, and artist. In his spare time he teaches a class on visionary plants and drugs at the UNIVERSITY OF CALIFORNIA AT DAVIS.

# TRICHOCEREUS PERUVIANUS ?

BY K. TROUT

A lot of questions keep coming up about what is or isn't *Trichocereus peruvianus*. To begin with it should be made clear that *T. peruvianus* is not the same cactus known as *Cereus peruvianus*. *C. peruvianus* is a common cactus that does contain phenethylamines, but none that are entheogenic. It is stout, fast-growing, and readily available. *Trichocereus peruvianus* is a very different plant.

## CACTACEAE TAXONOMY

There have been questions concerning the identity of the *T. peruvianus* sold by at least two speciality mail-order plant companies: **LEGENDARY ETHNOBOTANICAL RESOURCES** and **WILDFLOWERS OF HEAVEN**. The basis for this questioning, in both cases, is due to lack of entheogenic effects and nonstandard morphology. While on the surface it might seem that the cacti sold by these companies are not *T. peruvianus*, things are not so cut-and-dried for several reasons.

Great variability exists within most cactus species, and hybrid *Trichocereus* species exist and likely may be found in the horticultural market. It is not at all clear what is what, as nobody has carefully surveyed those cacti currently available. Many of these cacti have been in propagation for decades now—centuries, if you count Pedros in Peru and perhaps *bridgesii* in Bolivia. *T. peruvianus* and *T. pachanoi* are believed by some experts to be variants within the same species; with examples of all degrees of intergrades existing. It has been proposed that *T. bridgesii*, *T. cuzcoensis*, *T. macrogonus*, and a handful of other *Trichocereus* (most not chemically analyzed yet) might also be part of this complex. There are several other *Trichocereus* species that look very similar to *T. pachanoi*, but have larger areoles.

All of the horticultural cultivars currently available are in desperate need of a systematic evaluation that is unlikely to happen. If resources allow, we hope to shed some light on this subject in the next few years. Certainly a great many people are now growing verifiable *T. peruvianus* from seed, and increasingly from cuttings. It should be possible to better gauge the entheogenic usefulness of this species and get the most potent strains into the hands of more people for intensive propagation, but a concerted effort is required.

### LEGENDARY ETHNOBOTANICAL RESOURCES

The morphology of L.E.R.'s *Trichocereus peruvianus* [FIGURE 1] is fairly consistent with the description given in *The Cactaceae, Vol. 2* (BRITTON and ROSE 1920). (See page 21 for the original description, and our commentary on those aspects of L.E.R.'s cactus that *don't* fit this description.) While we don't know anyone personally who has bioassayed L.E.R.'s *T. peruvianus*, a letter printed in the *Psychedelic Resource List Supplement #7* stated, "My order from L.E.R. contained $100.00 of *Trichocereus peruvianus*. We ate it all, dried & fresh in huge amounts with absolutely no effects." This statement is too vague to be useful. L.E.R.'s *T. peruvianus* costs around $45.00 (with S/H), so we assume that two cuttings were ordered. Each of these cuttings (if they are similar to the one that we have) can be estimated to weigh more than a pound but definitely less than a kilo. (Our cutting was nearly a foot long and 2 $^3/_4$ inches in diameter.) This gives a ballpark figure of around 2–3 pounds of material consumed by two or more people. (We should mention that L.E.R.'s catalog describes their offering as one foot long and 3–4 inches in diameter, and we do know of one person who received a cutting this size. If this was the size of the cutting sent to the person who complained in the *PRL*, then the weight should be increased by at least $^1/_4$ or more.) They also state that they "ate it all, dried & fresh in huge amounts." Does this mean that they dried part of it and ate this with fresh material, or that dried and fresh material were eaten at different times? As for "huge amounts," if it was *T. pachanoi*, three pounds would *not* be a huge amount even for two people. Since their statement may imply multiple ingestions, the amount sampled is unclear. Don't people weigh things they ingest?!! Post Office scales will weigh accurately within one ounce (plenty close enough when dosing fresh cacti). Unless some meaningful measurement of dose and source is provided, subjective accounts have little value to anyone who might try to duplicate the results reported. The *actual* number of participants is also hardly a point to omit—"We" is too vague. Hence, it is hard to extrapolate much of anything about the activity of L.E.R.'s cacti from this report.

### WILDFLOWERS OF HEAVEN

One of the two individuals who originally mentioned that W.O.H.'s *T. peruvianus* [FIGURE 2] were inactive (published in *PRL Supplement #4*), had the plants examined by a number of people familiar with *Trichocereus* cacti, including the late D. M. TURNER, who on February 21, 1995 commented:

*I examined the cactus cutting you sent, and also brought it to someone with a large* Trichocereus *collection to* *assist in the identification. [...] The cutting is definitely not a* T. peruvianus, *as can easily be seen by a visual comparison between the two. The most easily identifiable difference is the spines.* T. peruvianus *has long, thick, dark colored spikes, for both the central and radial spines, which are much larger and darker than on the piece you sent me. [...] The "age" of the cactus has little effect on the appearance of the spines, as even fresh shoots and cuttings off the* T. peruvianus *have the larger spines. It would actually be difficult to pick up a cutting of* T. peruvianus *the size [...] you gave me without gloves, as it's so spiny there would be no place where you could put your fingers.*

*As a reference for* T. peruvianus, *an acquaintance of mine has put together what is probably the largest* Trichocereus *collection in California. He has a couple hundred tricho's consisting of at least a dozen [species], focussing on [species] with a reported mescaline content. He has managed to obtain 6 mother plants of* T. peruvianus, *nearly the entire batch that was first introduced to the [USA] by Jim Daniel in the 1950s.*

*As a second reference [the W.O.H. cutting] was compared to the specimens of* T. peruvianus *that are located in the U.C. Berkeley botanical gardens* [Figure 5], *and are clearly labeled as such. Although there is some variation among the different* T. peruvianus *specimens, they are all quite similar, with none of them appearing like the sample you sent. Your cutting did not show any of the bluish hue that is common with* T. peruvianus, *and had thicker skin, which seems much closer to a* T. pachanoi. *[...]*

*Your not getting any effects from eating an identical sample is also evidence of its not being a* T. peruvianus. *I have taken* T. peruvianus *and found that a 4" length, 4 1/2" outside diameter, will provide a very full experience the equivalent of about 500 mg. of mescaline sulfate. I've found* T. peruvianus *to be a good 50% more powerful than* T. macrogonus, *and probably triple the potency of* T. pachanoi. *[...] [My method of consumption] for* T. peruvianus *and others is to cut off the skin along with 1/4" of flesh. I put this in a blender with some water and liquefy. This is then boiled down, the pulp strained out, and the remaining liquid drunk [...].*

*Best of Journeys, — D. M. Turner (Turner 1995)*

Since the two original negative bioassays were presented to the *PRL*, two additional (unrelated) negative bioassays were reported. The *PRL* also received letters noting four *positive* bioassays of W.O.H.'s cacti! Concerned that these cacti might not be authentic—based on their morphology only, as these cacti are not sold for consumption—W.O.H.'s owner asked his supplier, Karel Knize, about their identity. In a letter from Lima, Peru, dated June 26, 1996, cactus dealer Knize commented that deciding what is or isn't a *T. peruvianus* is a highly sub-

## MESCALINE CONTENT ?

Counterculture literature found on the Internet and **ELSEWHERE** claims that *T. peruvianus* rivals *Lophophora williamsii* in potency. This apparently arises from an "applied" interpretation of a comment made in the sole paper reporting mescaline in this species (Pardanani *et al*. 1977). While they found 0.817% mescaline to be present in *T. peruvianus*, they compared it with the 0.3+% found reported from *T. pachanoi*—the lowest recovery published for this species (Crosby and McLaughlin 1973). 0.817% does indeed approach the 0.9% reported by F. E. Kelsey (Kelsey 1959), and some others, for *L. williamsii*. On the other hand, mescaline concentrations of up to 6.3% have been reported from *L. williamsii* (Heffter 1896)—though most specimens have been reported in the 1 to 2% range—and *T. pachanoi* has had 2% mescaline isolated from it (Poisson 1960). (All alkaloid percentages by dry weight.)

This not only indicates that the *T. peruvianus* that was analyzed was weaker than most *L. williamsii* specimens, but also that in the one published analysis in which mescaline was found, it was less than half-as-strong as the strongest reported *T. pachanoi*! While many reports of various alkaloid levels exist for *L. williamsii* and also for *T. pachanoi*, only a single published analysis of *T. peruvianus* has found mescaline present. At least two other researchers reported no mescaline when they analyzed this species (Agurell 1969; Djerassi *et al*. 1955—though Djerassi's assay for mescaline was flawed procedurally). Additionally, a friend who analyzed 1.5-year-old seedlings of *T. peruvianus* also detected no mescaline

Pardanani's supplier supposedly used KK 242 as their source for propagation. Whether-or-not this is an aberrant mescaline-producing strain is unknown. Sources were not reported for the other *T. peruvianus* tested (separately) that did not produce mescaline; Agurell used European nursery-grown cacti while Djerassi apparently used field-grown cacti. Source information was also unavailable to my friend who tested his seedlings.

In the case of the 1.5-year-old *T. peruvianus* analyzed, their age may have been a factor. In *T. pachanoi*, bioassay experience suggests that older plants are stronger than young ones. With *L. williamsii* it takes around five years before mescaline appears in any decent amounts, and almost double that long before they get potent. The lone published bioassay of grafted *L. williamsii* has also indicated low alkaloid content, and we suspect it is for the same reason; their bioassay used 1 3/4 inch plants that were grown in 3.5 months by grafting (Mercado *et al*. 1996). In spite of the large size of these young buttons, their lack of strength is not surprising due to their age.

On the other hand, we cannot ignore the fact that numerous bioassays of *T. peruvianus* do indicate that its entheogenic effects are subjectively stronger than *T. pachanoi*. Anecdotal reports from several psychonauts indicate that *T. macrogonus* is also stronger than *T. pachanoi*—a fact that the single published analysis of the species (Agurell 1969) suggests is unlikely (again underscoring the need for analyzing a broader selection of material).

Presently, the basis for this disparity remains a mystery. Perhaps some varieties or strains contain mescaline, and other do not. (It has been conjectured by one psychonaut that the blue forms of the cacti might prove highest in mescaline.) We are in the process of growing out a few different 'varieties,' and plan to do a comparative assay once size allows. In many other species, closely related varieties often show a different expression of alkaloids and sometimes differ as to whether alkaloids are present or not (SHULGIN and SHULGIN 1997)!

Those people selling purported but erroneous *T. peruvianus* are—for the most part—not cactus dealers; they are rare plant dealers who offer a few cactus species. *We do not suggest or suspect any deliberate deception on their part.* The stock that actual cactus dealers have is usually correctly identified, but errors can and do occur.

In recent years, *T. peruvianus* is increasingly difficult to find, as entheogen aficionados who encounter this cactus for sale will purchase all of the stock they come across. We personally know of two separate instances where the purchaser bought out the entire inventory of large cactus suppliers. CACTUS UNLIMITED (in Cupertino, CA) recently mentioned that they had a waiting list for this species! *T. peruvianus* seeds, on the other hand, are readily available.

## WHAT NOW ?

It is clear that at least two mail order sources are selling cacti that *may* not be what they are representing them to be. Yet, as indicated earlier, it is not certain that even authentic *T. peruvianus* is always going to be psychoactive. We are interested in collecting more data on this topic, to try to sort things out a bit better. We would love to hear more about *your* personal experiences—what worked and what didn't. Points to include when possible:

1) What is the body weight of the person who ate the cacti?
2) How much was consumed? (List dry or fresh weight when known.)
3) What part of the cacti was consumed?
4) How was it consumed?
5) What was the source of the cacti?
   (Why were they believed to be *T. peruvianus*?
   Is a varietal name or other identifier known?)
6) How old were the cacti?
7) What time of year was the cacti harvested?
8) How many ribs did the cacti have?
9) What effects (or lack of effects) did it have?

Photographs, especially with clear shots of the spines and areoles, are appreciated. If you'd like your photos returned, please note this and include a SASE. Please use a pseudonym on all correspondence. Send to: **T. PERUVIANUS PROJECT**, c/o *The Entheogen Review*, 564 Mission Street, Box 808, San Francisco, CA 94105-2918. Thanks! ✱

jective problem, because there isn't any clear definition of the species. He noted that, "The cuts we sent to you [are] genuine, local species from the original locality and reproduced by parts (no seeds). We [are aware of] 3-5 forms and I collected all forms" (KNIZE 1996).

KNIZE's comment that there are between three and five different forms of *Trichocereus peruvianus* (that he sells wholesale) is interesting, as it might explain why some psychonauts who consumed cacti from W.O.H. experienced no effects, while others reported these cacti to be entheogenic. It is worth noting that the *one* strain that tested positive for mescaline, KK 242, originated from KAREL KNIZE!

W.O.H. no longer buys *T. peruvianus* from KAREL KNIZE, as they have found another supplier. This points out something that might not be immediately obvious; the wholesale source for cacti retailers may change without any notice to the consumer. Hence, a company that at one time sold entheogenic cacti, may now be selling inactive cacti (and visa versa).

We viewed the cacti that W.O.H. had for sale at the MIND STATES conference, and noticed a great deal of variation among what was being offered. Many of these cacti had smaller spines, looking similar to the cacti that W.O.H. had obtained from KAREL KNIZE. Despite this morphological disparity, these cacti have been reported to be entheogenic.

### ELSEWHERE

A recent example of this claim appears in *Peyote and Other Psychoactive Cacti* by ADAM GOTTLIEB. Republished in 1997 by RONIN PUBLISHING, INC. (an "update" of the 1977 booklet), this book states: "*T. peruvianus* is purported to contain ten times the mescaline content of San Pedro (i.e. approximately the same content as peyote)." It seems likely that the 1977 version of this book may have been the origin of the urban legend that *T. peruvianus* is "ten times" as potent as *T. pachanoi*, and it is unfortunate that GOTTLIEB (and now RONIN) continue to propagate this misleading information.

K. TROUT is a scholar, independent researcher, and author of *Sacred Cacti and Some Selected Succulents*. He also offers TROUT'S NOTES—an information abstraction and annotation service related to entheobotany. For a current listing of available TROUT'S NOTES, see page 12.

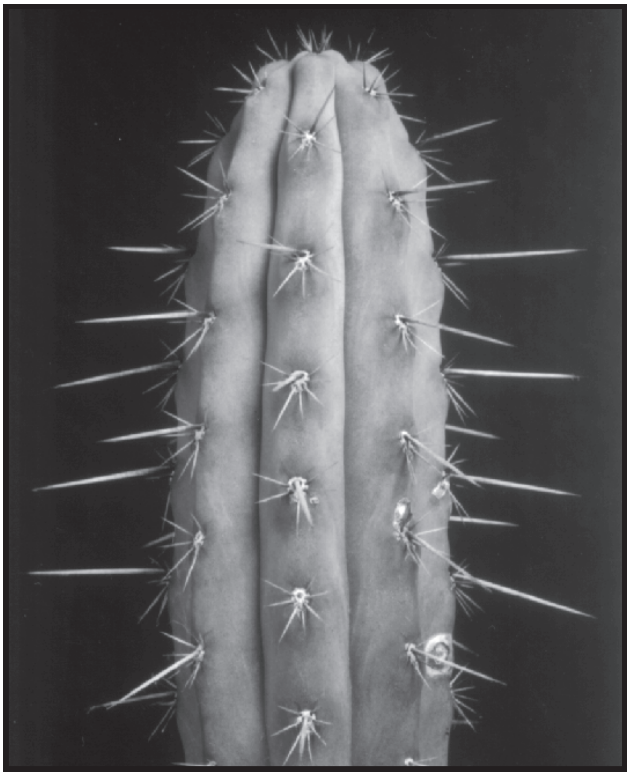

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**Figure 1.** L.E.R.'s *Trichocereus peruvianus*.

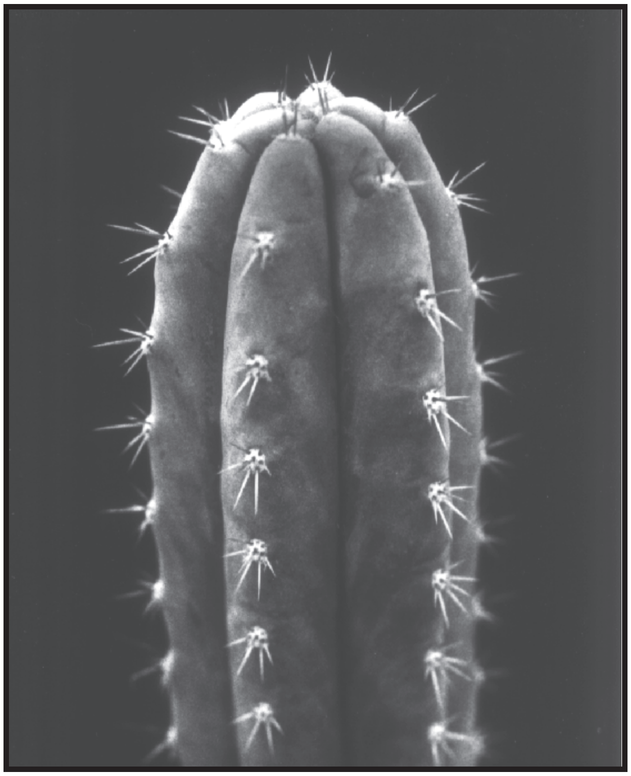

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**Figure 2.** W.O.H.'s *Trichocereus peruvianus*.

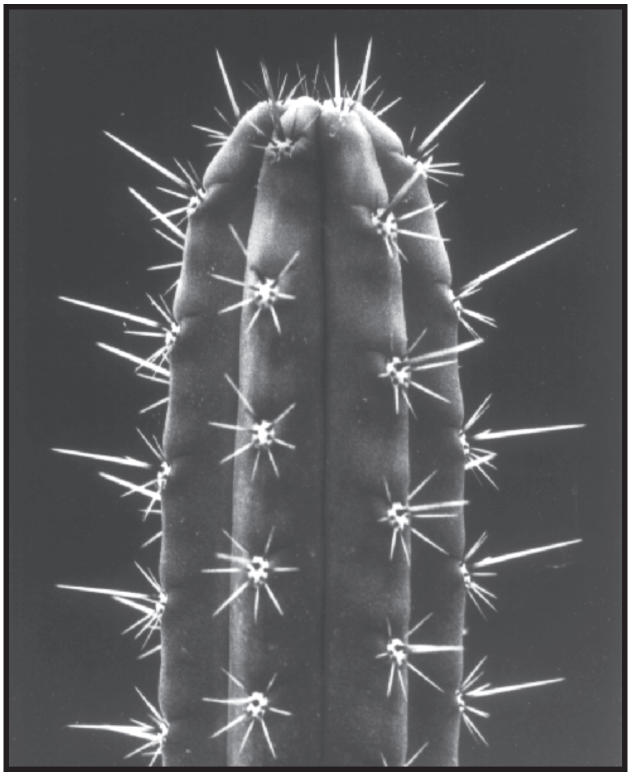

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**Figure 3.** O.T.J. seed-grown *Trichocereus peruvianus*.

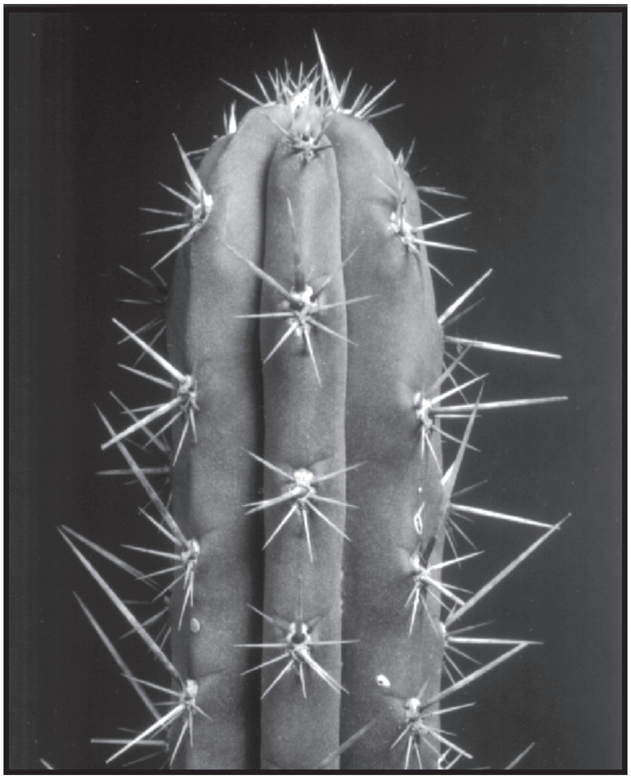

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**Figure 4.** KK 242 *Trichocereus peruvianus*.

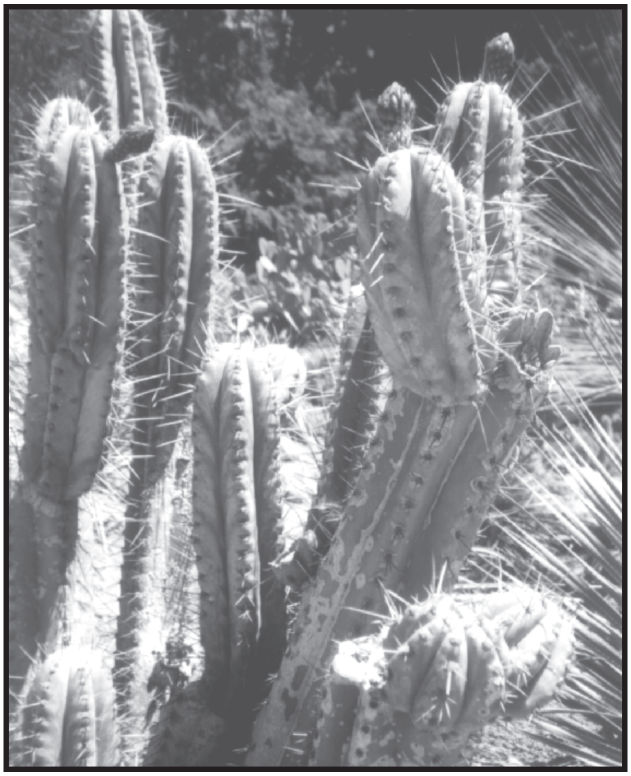

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**Figure 5.** An adult *Trichocereus peruvianus* grown in full sun.

“**Trichocereus peruvianus** sp. nov.

“Plant 2 to 4 meters high with numerous erect or ascending, stout branches, 15 to 20 cm. in diameter, glaucous when young; ribs 6 to 8, broad and rounded, areoles large, 2 to 2.5 cm. apart, brown-felted; spines brown from the first, about 10, unequal, some of them 4 cm. long, rigid and stout, not at all swollen at base; areoles on ovary and flower-tube hairy; mature flowers not seen but evidently large and probably white.

“Collected by Dr. and Mrs. Rose near Matucana, Peru, altitude 2,100 meters, July 9, 1914 (No 18658). This species resembles *T. bridgesii* but has stouter and darker spines. It is found on the western slopes of the Andes at a much lower altitude than that species.” [From page 136 of *The Cactaceae* by Britton and Rose 1920.]

“**T. peruvianus** Br. & R. (1)

“**Bo.** erect at first, then arching over or even prostrate, to 7 m lg., bluish-green, frosted; **St.** to 20 cm Ø; **Ri.** 6–8, broadly rounded, with a V-shaped notch over the Ar.; **Ar.** large, brown-woolly; **Rsp.** 6–8, to 1 cm lg.; **Csp**. mostly 1, to 4 cm lg.; **Sp.** honey-coloured below, darker above; **Fl.** very large, white.—Peru (near and above Matucana, on the Central Peruvian Andean railway).” [From page 496 of *Cactus Lexicon* by Backeberg 1977.]

**Figure 1:**

Large brown woolly areoles and no more than eight ribs are described for *T. peruvianus*. The L.E.R.’s cacti that we’ve examined does not have large or brown woolly areoles, and at least one specimen had nine ribs. They do have the characteristic V-shaped groove above each areole, but this is a feature that also shows up in other *Trichocereus* (for example, it is occasionally present on *T. bridgesii*).

**Figure 2:**

W.O.H. cactus have much shorter spines (consistently) than are described for *T. peruvianus*. Indeed, they do appear to be a hybrid of *T. pachanoi* and *T. peruvianus*, as they also lack the bluish tint of the latter, appearing closer in color to the former. While D. M. Turner opined that the “age of the cactus has little effect on the appearance of the spines, as even fresh shoots and cuttings off the *T. peruvianus* have the larger spines,” it has been our experience that the spines on the growing tip of the cactus (perhaps the top six inches) frequently have smaller spines than the main body of the cactus. *T. peruvianus* spines appear to increase in length, the older the cactus gets (see description below of Figure 4), and they also may take on a greyish tint with age. This isn’t true with the samples of W.O.H. cacti that we’ve seen—the spines have been uniformly small (though larger than *T. pachanoi*) for the entire length of the cacti.

**Figure 3:**

A *T. peruvianus* that is about three years old, grown from seed obtained from the now defunct mail-order botanical company ...Of The Jungle. This plant matches the description for *T. peruvianus* fairly well, though the areoles aren’t brown.

**Figure 4:**

An example of the KK 242 *T. peruvianus* strain that tested positive for mescaline.

**Figure 5:**

The cacti in residence at the U.C. Berkeley Botanical Gardens are some of the largest that we’ve seen. Their *T. peruvianus* is no exception. It is hard to compare growing shoots that are only a few years old and which have never seen full sun to these monsters, as there are differences that are due to age and environment. The spines on these older cactus grown in full sun are quite a bit longer, and they appear to become gray with age. These cacti are *very* similar in appearance to the adult/full sun-grown *T. peruvianus* in cultivation alongside a fence at The Peyote Foundation.

# BOOK REVIEWS

## PHARMACOPHILIA OR, THE NATURAL PARADISES

Reviewed by Jon Hanna

JONATHAN OTT's latest book kicks off with a poem. In reviewing this, it would be unfair to both the reader and to Mr. OTT, if I didn't make it clear that—in general—I am not a fan of poetry. With that noted, I can say that I almost wasn't able to read "Phytomphalos" in its entirety. OTT's poem is heavily inspired by various influences, which he references in the first endnote, "So as not to lame the music with citations and quotation marks." While OTT has chosen his influences well, frequently paying tribute to THOREAU and BLAKE, I believe that OTT's *overwhelming* penchant for alliteration pays unmentioned tribute to another "great" of poetry—THEODOR S. GEISEL. Unfortunately, the massive alliteration that inundates OTT's opening poem also leaks into the text of *Pharmacophilia*. And, while occasionally amusing, it is more often than not an irritating side effect—causing the reader to seek out some *less* "artificial paradise." Quite aware that poetry is off-putting to some, OTT admits that there is only "a small minority of human animals in principle transportable to the artificial paradises of poetry," but then remarks that "alliterative word-music poetry [...] is capable of stirring the souls of even those who do not apprehend or comprehend its words," citing the "artificially-constructed linguistic system" of JAMES JOYCE's *Finnegans Wake*. However, OTT's "linguistic system" is too similar to English. By using words that are semi-recognizable, OTT "lames the music" of his poem by causing the reader to repeatedly consult the dictionary throughout the reading! I am hopeful that the *Lorax of Ludibund Lozenges* will, in the future, stick to well-written prose (which is certainly his forte), and part from the "paradise" of poetry—which, like so much *artificial* sweetener, leaves a bad aftertaste.

Poetry aside, *Pharmacophilia* is excellent. OTT argues that the "paradises" drugs can trigger in humans are completely *natural*. OTT challenges 1800s French poet CHARLES BAUDELAIRE's terminology of these states of consciousness—*Les Paradis Artificiels* (*artificial* paradises)—and through a number of examples shows that BAUDELAIRE was even likely aware that these are paradises of *natural* construct.

Presenting commentary on the history of the "celestial pharmaceutics"—entheogens such as *Amanita muscaria*, *Lophophora williamsii*, and psilocybian mushrooms—OTT convincingly argues that these genuine sacraments were likely the root of religious thought. Idiosyncratic responses to various drugs are reported; genetic and neurochemical variations are cited as possible reasons for these experiential differences. The "self-medication" theory is presented and lent credence by pharmacological studies. Beneficial directions for psychopharmacological engineering to take are espoused. As to be expected, all topics are blended together skillfully with OTT's impeccable logic, humor and scathing political commentary, as the following quote testifies to:

> Spinelessly submitting to the tyranny of unelected 'Drug Tsars,' citizens of the United States consent to degrading assaults on human dignity—urinalysis on the job, 'body-cavity searches' in customs—debased and demeaned, not by drugs, but by our obsequiousness. True to form, it's now become fashionable for cancerous smokers to pursue lawsuits against the tobacco companies, as 'though they had been forced to ingest tobacco products like so many helpless laboratory animals—the macho 'Marlboro Man' pathetically transmogrified into whimpering weakling, powerless to resist the siren songs of smokes!

To a small extent, *Pharmacophilia* can be seen as a much-expanded redux of "The Etiology of Religion: A History of Hallucinogen Use," and "The Biochemistry of Emotion;" two chapters from OTT's 1976 book *Hallucinogenic Plants of North America*. A number of themes that run through these chapters also appear in *Pharmacophilia*—replete with the same quotes as examples! It is interesting to compare these two works, noting the point OTT was at a couple of decades ago, and the direction that his writing has taken. His current book presents a well-researched multidisciplinary approach to the study of drug use, throughout the text and the endnotes.

*Pharmacophilia* is heavily annotated (over half of the text appears in the "Notes"), presenting scientific evidence to back the theories that OTT proposes. Unfortunately, OTT oddly omitted a bibliography in *Pharmacophilia*, instead including all of the works cited in these endnotes. This makes it much more difficult to look up references—one must painstakingly scan the Notes to find what one is looking for, rather than easily check an alphabetized bibliography.

Even *with* the poetry (yech) and *sans* bibliography (sigh), I can heartily recommend *Pharmacophilia*—my copy of which is already heavily dog-eared. Available for $18.00 softcover, or $36.00 hardcover, plus $3.00 S/H per book from: Jonathan Ott Books, POB 1251 (Dept. ER), Occidental, CA 95465.

## THE SECRET CHIEF

### Conversations with a Pioneer of the Underground Psychedelic Therapy Movement

Reviewed by Will Beifuss

*The Secret Chief* is the transcribed talks between Myron Stolaroff and "Jacob," the pseudonym given to the Jungian psychologist who pioneered the use of psychedelics as an adjunct to therapy throughout the '60s and '70s. Nicknamed "the Secret Chief" by his friend Terence McKenna, he also appears in the Shulgin's book *PIHKAL* under the pseudonym "Adam Fisher." These interviews were conducted in 1981 when Jacob was 70, six years before his death. Jacob was responsible for introducing nearly 3000 people (clients and other therapists) to the benefits of psychedelics for personal growth. He was one of a small coterie of therapists who continued to use this medicine even after the repressive laws of the mid-sixties ground all research to a halt. After a lifetime of service to others, Jacob had the admiration and respect of all those who were fortunate enough to know him. Myron sums it up best:

> Jacob was a man who brought new life and opportunity to many hundreds of individuals, often in total life-transforming ways. He was dearly loved. This was not because of his elegant expression or professional training. It was because he was blessed with an abundance of heart, the most necessary prerequisite for someone accompanying others into the depths of their very souls.

*The Secret Chief* is an excellent book that pays homage to a man who richly deserves the recognition for bringing so much clarity and insight into the lives of so many people. Available for $10.95 plus $3.00 S/H from: MAPS, 2121 Commonwealth Avenue, Suite 220 (Dept. ER), Charlotte, NC 28205. All profits from the sale of *The Secret Chief* will be devoted to psychedelic psychotherapy research.

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